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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,667	10/24/2003	Kouichi Takeuchi	12014-0022	6353

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EXAMINER	
CARRILLO, BIBI SHARIDAN	
ART UNIT	**PAPER NUMBER**
1746	

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary	Application No.	Applicant(s)	
	10/691,667	TAKEUCHI ET AL.	
	Examiner	Art Unit	
	Sharidan Carrillo	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *8-14 and 18-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 15-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-20* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 October 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *03022004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

   I. Claims 1-7 and 15-17, drawn to the method, classified in class 134, subclass 28.

   II. Claims 8-14 and 18-20, drawn to an apparatus, classified in class 134, subclass 84.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the apparatus can be used for a different method such as cleaning of semiconductor wafers.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Mr. Christopher Brody on 8/3/04 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-7 and 15-17. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-14 and 18-20 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

5. Figure 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-7 and 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because it is unclear what is meant by distribution ratio. In claims 1 and 5, it is unclear where the amount of acid is being supplied to. Claim 1 is indefinite because it is unclear what is meant by the pickling pattern for the steel strip and the distribution ratio. What is the distribution ratio? Claim 2 is indefinite because it is unclear what value is used to determine the distribution ratio. What is the value used to determine the distribution ratio and further, what are the predetermined set values. Is the value the same as the scale thickness, width, or traveling speed? Claim 3 is indefinite because the value for the scale thickness lacks positive antecedent basis.

Claim 5 is further indefinite because the concentrations of the pickling solution lacks positive antecedent basis. It is also unclear the relationship between the concentration of the pickling solution and the thickness, width, traveling speed and the amount of acid solution. Claim 5 is further indefinite because it is unclear what is the set value. Additionally, is the pickling solution the same as the acid solution. Claim 6 is indefinite because the predetermined set value for the scale thickness and the distribution ratio lacks positive antecedent basis. It is unclear what is meant by "correction value of control which is obtained by addition with respect to supply of the pickling solution". Claim 15 is indefinite because the value for the scale thickness lacks positive antecedent basis.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-2, 4-7, and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Mabuchi et al. (6096137).

In reference to claims 1, 4, and 16, Mabuchi et al. teach a method of controlling pickling by monitoring operating conditions such as thickness and width of the steel strip, line speed (Abstract) and calculating the concentration of acid supplied into the pickling tank based on the above parameters.

In reference to the distribution ratio, Mabuchi et al. Teach calculating and controlling the concentration distribution of aid based on the operating conditions (col. 2, lines 39-65). In reference to claims 2 and 6, and in view of the indefiniteness, the limitations are met by Mabuchi et al. In reference to claim 6, also refer to col. 3, lines 25-31. In reference to claim 5, refer to col. 7, lines 15-25 which teaches determining preset values for the concentration of the acid. In reference to claims 7 and 17 refer to Fig. 1.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mabuchi et al. (6096137) in view of Kawasaki et al. (4872245).

Mabuchi et al. teach the invention substantially as claimed with the exception of scale thickness based on the steel type. Page 6 of the instant specification teaches "steel type" based on the steel composition and coiling temperature.

Kawasaki et al. teach a method for continuous pickling of a hot-rolled steel strip (Abstract). In col. 7, lines 35-45, Kawasaki et al. teach that the type or grade and coiling temperature are initially set in the control computer. The properties of quantity of scale is determined based on the input in the control computer.

It would have been obvious and within the level of the skilled artisan to modify the method of Mabuchi et al. to include adjusting the scale thickness based on the operating parameters, as taught by Kawasaki et al, for purposes of removing scaled from the surface of the hot-rolled steel.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rodabaugh et al. teach a method and apparatus for determining acid concentration. Kohno et al. teach holl-rolled stainless steel. Nonaka et al. teach automatic control of acid concentration.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharidan Carrillo whose telephone number is 571-272-1297. The examiner can normally be reached on Monday-Friday, 6:00a.m-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit 1746

bsc

SHARIDAN CARRILLO
PRIMARY EXAMINER